The probiotic effector molecules in *Lactobacilli* and their action mechanism: A review

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The mechanism underlying the variety of health benefits of probiotic *Lactobacillus* remains poorly understood (Marco et al., 2006). During the last decade, a substantial body of scientific evidence has accumulated suggesting that certain surface-associated and extracellular components produced by *Lactobacillus* could be responsible for some of their mechanisms of action. They are thought to play essential roles in the molecular intercommunication between host-bacteria, and in the monitoring of the bacterial environment (van Pijkeren et al., 2006). In *Lactobacillus*, these probiotic effector molecules could be responsible for some of probiotic traits, such as pathogen inhibition and immunomodulation (Buck a, 2005), and it is urgently to exploit more probiotic effector molecules in order to have a better understanding of how commensal, probiotic, and pathogenic microorganisms interact with one another and the mammalian host.

In this presentation, we systematically review the most interesting aspects of probiotic effector molecules derived from genera *Lactobacillus*. Additionally, the potential mechanisms of specific probiotic effector factors and the responses they can induce in the host will also be discussed. We also wish to provide some insights for further elucidation of microbe-microbe and microbe-host interactions involved in the probiotic effects of *Lactobacillus* at the molecular and cellular levels.

Biography
Zhigang Zhou has completed his PhD at the age of 28 years from Institute of Hydrobiology, Chinese Academy of Sciences and postdoctoral studies from Shantou University. He is the director of Department of Aqua Nutrition and Feed, Feed Research Institute of CAAS with the subject ‘fish gut microbe’. He has published more than 60 papers in reputed journals.

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